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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,397	01/18/2002	Qingquan Su	2002-0048A	2302

513 7590 07/20/2004

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EXAMINER	
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ART UNIT	PAPER NUMBER
1764	

DATE MAILED: 07/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/031,397	SU ET AL.
	Examiner	Art Unit
	Hien Tran	1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 February 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *8-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 8-17, 21, 23-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 8, lines 13-14 it is unclear as to where it is disclosed in the specification.

Claims 12, 14-17, 21, 23-26 are improper dependent claims as they fail to further limit the subject matter of the previous claims. Apparently, claims 14-17, 21, 23-26 merely recite process limitations and therefore are not structurally further limiting.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 8, 12, 14-17 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 2-86627.

JP 2-86627 discloses an apparatus comprising: an absorption tower, wherein the absorbent discharged from the absorption tower is brought into contact with air in a regeneration tower, to be regenerated and the regenerated absorbent is recycled into the absorption tower.

Note that method limitation/intended use is of no patentable moment in apparatus claims.

Since claims 12, 14-17 merely recite process limitations, they are not structurally further limiting. Accordingly, instant claims 8, 12, 14-17 structurally read on the apparatus of JP 2-86627.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2-86627 in view of CA 1,295,810.

The apparatus of JP 2-86627 is substantially the same as that of the instant claims, but fails to disclose whether more than one regenerator may be provided.

However, CA 1,295,810 discloses the conventionality of providing a system having an absorption tower, at least two absorbent regeneration towers, wherein the

absorbent discharged from the final regenerator tower is recycled into the absorption tower by means of a circulation pump.

It would have been obvious to one having ordinary skill in the art to provide more than one regeneration tower as taught by CA 1,295,810 in the apparatus of JP 2-86627 for enhancing the regeneration efficiency thereof and since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

8. Claims 11, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2-86627 in view of Lagana et al (4,367,258).

With respect to the provision of the gas-liquid separator, it is a well known and commonly used to provide a gas liquid separator for separating the gas entrained in the liquid discharged after treatment in a gas-liquid contact apparatus as evidenced by Lagana et al.

9. Claims 8-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lagana et al (4,367,258) in view of JP 2-86627.

Lagana et al discloses an apparatus comprising: first and second gas scrubbing sections 25, 28; first and second scrubbing liquid regenerators 30, 35 and circulating means.

The apparatus of Lagana et al is substantially the same as that of the instant claims, but fails to discloses whether the regenerating gas in both regenerators may have components different from the first and second gas scrubbing liquid.

However, Lagana et al discloses that the regenerating gas in one of the regenerators is different from the gas scrubbing liquid (col. 1, line 55-68).

JP 2-86627 discloses the conventionality of using a regenerating gas, e.g. air, different from the gas scrubbing liquid.

It would have been obvious to one having ordinary skill in the art to use a regenerating gas different from the gas scrubbing liquid in both regenerators of Lagana et al, as the use of such is conventional in the art as evidenced by Lagana et al and JP 2-86627 and therefore no cause for patentability here.

Note that method limitation/intended use is of no patentable moment in apparatus claims.

Since claims 12, 14-17, 21, 23-26 merely recite process limitations, they are not structurally further limiting. Accordingly, the apparatus of Lagana et al as modified by JP 2-86627 structurally meet the instant claims.

Lagana et al discloses provision of a gas liquid separator disposed downstream of the regenerator. It would have been obvious to one having ordinary skill in the art to provide a gas liquid separator for separating the gas entrained in the liquid discharged from the absorption tower as well as from regenerators as evidenced by Lagana et al.

Response to Arguments

10. Applicant's arguments filed 2/23/04 have been fully considered but they are not persuasive.

Applicants argue that none of the prior art discloses that the gas to be scrubbed is a gas comprising a combustion gas generated by incineration of combustibles or a produced gas generated by gasification of combustibles and the gas obtained from the regenerator comprising the regeneration gas into which steam is mixed. Such contention is not persuasive as the gas to be scrubbed and the product gas from the generator are not

parts of the apparatus and therefore are of no patentable moment in apparatus claim. Note that it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien Tran whose telephone number is (571) 272-1454. The examiner can normally be reached on Tuesday-Friday from 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hien Tran

Hien Tran
Primary Examiner
Art Unit 1764

HT
July 19, 2004